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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,989	09/30/2003	Young-Nam Yun	1190860-991270	7709

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EXAMINER

VU, PHU

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,989

Applicant(s)

YUN ET AL.

Examiner

Phu Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see remarks, filed 9/12/05, with respect to the rejection(s) of claim(s) 1-24 under 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kaneko US 6525707.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1-2, 6-7, 9, 14, 18, 19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaneko US 6525707.

Regarding claim 1, Kaneko teaches a liquid crystal display comprising: a back light assembly (fig. 21 element 19) that generates a first light (fig. 21 element 19); a liquid crystal display panel including an upper substrate (2), a lower substrate (1) and the lower substrate, and liquid crystal display panel receiving the first light generated from the back light assembly to display an image; a first polarizing plate disposed on the upper substrate (8); a selective reflection polarizing plate (65) disposed on the first polarizing plate and a second polarizing plate (9) disposed on the lower substrate (1).

Regarding claim 13, Kaneko teaches a method of manufacturing a liquid crystal display comprising forming a liquid crystal display panel including an upper substrate (fig. 21 element 2), a lower substrate (1) facing the upper substrate, and a liquid crystal layer (6) interposes between the upper substrate and the lower substrate; attaching a first polarizing plate (8) on the upper substrate; attaching a second polarizing plate on the lower substrate (9); and attaching a selective reflection polarizing plate (65) on the first polarizing plate, the selective reflection plate selectively reflecting an external light.

Regarding claims 2 and 14, Kaneko teaches the second polarizing plate (9 is an absorptive polarizer/analyzer) polarizes the first light generated from the back light assembly (19), the first polarizing plate (8 is an absorptive polarizer/analyze) analyzes a second light that passes through the liquid crystal panel.

Regarding claims 6 and 18, Kaneko teaches the reflective polarizing plate polarizes the first polarizing axis of the first polarizing plate is parallel with a polarizing plate of the selective reflection polarization plate (see fig. 22 element 8a , 8a refers to

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the absorption axis the polarizer therefore the polarization axis of the first polarizing plate would be perpendicular to 8a ie parallel to 9a).

Regarding claim 7 and 19, Kaneko teaches a first polarizing axis (fig. 22 element 8a) of the first polarizing plate is substantially perpendicular to a second polarizing axis of the second polarizing plate (fig. 22 element 9a).

Regarding claim 9 and 21, Kaneko teaches the selective reflective film corresponds to a linear selective reflection film (see column 17 lines 45-55).

Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Gilbert US 5699188.

Regarding claims 3 and 15, Kaneko teaches all the limitations of claim 3 except the reflection polarizing plate reflection light above 50% of external light. Gilbert teaches a reflective polarizer with broadband application that transmits less 40% and desirably less than 25%. A reflective polarizer therefore will reflect the rest thus this leads to a reflectance of above 50%. Therefore, at the time of the invention, it would have been obvious to one ordinary skill in the art to apply a reflective polarizer with reflectance higher than 50% to provide a wide bandwidth polarizer (400-700 nm) (see column 6 lines 15-25).

Claims 10 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Jonza US 5882774.

Regarding claims 10 and 22, Kaneko teaches all the limitations of claim 10 except a reflective polarizer being a dual-brightness enhancement film. Jonza teaches a dual-bright-enhancement film that has high reflectivity over a wide bandwidth (see

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abstract). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to apply a DBEF to achieve reflectivity over a wide bandwidth.

Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Kim US 6099993.

Regarding claims 4 and 16, Kaneko teaches all the limitations of claims 4 and 16 except the upper substrate having color filters arranged in a matrix shape, and a black matrix disposed between them. Kim teaches a color filter substrate (upper substrate) having color filters (fig. 1 3R, 3G, 3B) arranged in a matrix shape (fig. 1 element 5 with a black matrix disposed between them as a conventional structure (see column 1 lines 35-45). Conventional has associative benefits as a well-developed implementation that is normally easier/cheaper/more efficient to implement. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply an upper substrate with color filters arranged in a matrix shape with a black matrix disposed between to gain benefits of conventionality.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Kozaki US 5035928 in view of Kamazaki US 6144426.

Regarding claims 8 and 20, Kaneko teaches all the limitations of claims 8 and 20 except the first and second polarization axes being parallel (polarizers on each side of liquid crystal cell. Kozaki teaches a normally black mode displays are formed by using polarizers on each side of a liquid crystal cell having their polarization axes parallel (column 1 lines 30-45). Kamazaki teaches that while normally white mode displays have superior contrast, normally black mode displays have defects that are

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less pronounced compared to normally white mode displays (column 3 lines 15-30).

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art apply parallel polarization axes two the first and second polarizing plates to form a normally black mode display whose defects are less pronounced.

Claims 11-12 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko in view of Li US 6532049.

Regarding claims 11-12 and 23-24, Kaneko teaches all the limitations of claims 11-12 and 23-24, except the selective reflection film being a circular selective reflection film of cholesteric liquid crystal. Li teaches a circular selective reflection film made of cholesteric liquid crystal that can operate of a broad band of application approaching 2000 nm (see abstract). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to apply a cholesteric liquid crystal to achieve operation of a broadband.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562.

The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu
Examiner
AU 2871


ANDREW SCHECHTER
PRIMARY EXAMINER